

### ***Remarks***

Upon entry of the foregoing amendment, claims 59, 66-71, 77, 83-88, and 94-100 are pending in the application, with claims 59, 77, and 94 being the independent claims. Claims 59 and 77 are sought to be amended for clarification. Support for the amendments to claims 59 and 77 can be found, for example, on page 3, line 30, thru page 4, line 6, as well as the discussion of FIGs. 5a and 5b (e.g., page 15, line 13, thru page 17, line 4) in the specification as originally filed. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider the outstanding rejections and that they be withdrawn.

### ***Rejections Under 35 U.S.C. § 102***

The current Office Action states on page 3 (section 4) that claims 59, 66, 77, 83, and 94 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. No. 6,385,253 B1 to James L. Swisher (hereinafter, "Swisher"). Applicants respectfully traverse this rejection and request that it be reconsidered and withdrawn based on the following remarks.

Swisher does not teach, or even suggest:

*a single-ended receive channel configured to receive and process a differential input signal from a twisted pair telephone line that has been converted to a single-ended input signal;*

...

a converter configured to convert the differential input signal from the twisted pair telephone line to the *single-ended* input signal for the receive channel, and convert a single-ended output signal from the transmit channel to a differential output signal for transmission on the twisted pair telephone line;

an automatic gain control having a *single-ended* input coupled to the single-ended receive channel, and a *single-ended* output;

a *single-ended* first filter coupled to the automatic gain control output;...

as recited in claim 59, for example (emphasis added). Swisher does not teach a single-ended receive channel. In the Office Action, the Examiner asserts that the conversion of a differential input signal from a twisted pair telephone line to a single-ended input signal for the receive channel is inherently performed within a segment of FIG. 3 of Swisher that includes blocks 345, 343, 340, 330, 305, and 317. With the exception of block 305, these blocks arguably represent a receive channel. However, Swisher makes it clear that its receive channel is *not* single-ended and/or *does not* include conversion from a differential input signal to a single-ended signal.

As stated in Applicants' previous reply, Swisher very explicitly describes its upstream transmit channel (which appears to include at least blocks 300, 301, 311, 303, 305, and 330 of FIG. 3) as single-ended (see Swisher, col. 3, lines 48-57). Swisher states that "[a] buffer 301 converts the differential signal into a single ended signal ..." and "... [a] line driver 305 amplifies the upstream signal to approximately 0dBm and converts it into a differential signal." This indicates that the upstream signal is a differential signal when it is passed from line driver 305 to diplexer 330 and on through blocks 340, 343, 345, and 350 to the twisted wire pair 130. There is neither explicit discussion nor implication that the signal processing through blocks 340, 343, 345, and 350 is single-ended. If processing through these blocks were single-ended, there would be no need to convert, at block 305, the upstream transmission signal from a single-ended signal to a differential signal prior to the signal passing to diplexer block 330. Thus, Swisher does not teach a single-ended receive channel, and therefore does not teach each and every element of claim 59. None of the other references cited in the Office Action remedy the deficiencies of Swisher.

The Examiner's response to the above argument states that "Swisher converts a receive differential signal into a single-ended signal and a transmit single-ended output into a differential signal." In support of this response, the Examiner refers to col. 3, lines 48-57, of Swisher. Applicants disagree, however, because col. 3, lines 48-57, of Swisher describes only a transmit channel, as discussed in the previous paragraph. Because the Examiner may be comparing the differential signal "received" at DAC 300 of Swisher as the "differential input signal" recited in the present claims, claims 59 and 77 are amended to clarify that the "differential input signal" is the signal that comes into the device from the twisted pair telephone line. This is already made clear in claim 94.

Accordingly, Applicants submit that independent claim 59 is patentable over Swisher for at least the above reasons. Furthermore, Applicants submit that independent claims 77 and 94 (which include similar features regarding a single-ended receive channel) are also patentable over Swisher for at least the reasons given for claim 59. Claim 66 that depends on claim 59 and claim 83 that depends on claim 77 are also patentable over Swisher for at least the reasons provided above, and further in view of their own features. Therefore, Applicants respectfully request that the rejections of claims 59, 66, 77, 83, and 94 be reconsidered and withdrawn.

***Rejections Under 35 U.S.C. § 103***

The current Office Action states on page 6 (section 5) that claims 67-69, 84-86, and 95-100 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Swisher, as applied to claims 66, 83, and 94, in view of U.S. Pat. No. 6,621,346 B1 to Nabicht *et al.* (hereinafter, "Nabicht"). Claims 67-69 depend on claim 59, claims 84-86 depend on claim 77, and claims

95-100 depend on claim 94, and thus are patentable over Swisher for at least the reasons provided above for claims 59, 77, and 94. The disclosure of Nabicht does not overcome the deficiencies of Swisher. Claims 67-69, 84-86, and 95-100 are therefore patentable over Swisher and Nabicht, alone or in any rational combination, for at least the same reasons as claims 59, 77, and 94, and further in view of their own features. Accordingly, Applicants request that this rejection be reconsidered and withdrawn, and that claims 67-69, 84-86, and 95-100 be passed to allowance.

The current Office Action states on page 7 (section 6) that claims 70-71 and 87-88 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Swisher and Nabicht as applied to claims 69 and 86, and further in view of U.S. Pat. No. 4,178,482 to Maurice J. Ouellette (hereinafter, "Ouellette"). Claims 70-71 depend on claim 59 and claims 87-88 depend on claim 77; thus, claims 70-71 and 87-88 are patentable over Swisher and Nabicht for at least the reasons provided above for claims 59 and 77 above. The disclosure of Ouellette does not overcome the deficiencies of Swisher or Nabicht. Claims 70-71 and 87-88 are therefore patentable over Swisher, Nabicht, and Ouellette, alone or in any rational combination, for at least the same reasons as claims 59 and 77, and further in view of their own features. Accordingly, Applicants request that this rejection be reconsidered and withdrawn, and that claims 70-71 and 87-88 be passed to allowance.

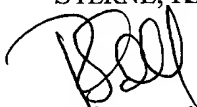
***Conclusion***

The stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider the presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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